Professional development for mainstream teachers of ELLs
Project GLAD® and Beyond

Theresa Deussen
March 10, 2014
The challenge
Today’s Agenda

• Describe what ELLs in mainstream classrooms commonly receive

• Focus on one program—Project GLAD—and Year 1 results from our experimental study

• Take a closer look at what our findings mean for closing the achievement gap

• Raise some questions about what schools can do to have a bigger impact
Language and content

SIOP
Sheltered Instruction Observation Protocol

QuEST
Quality Science and English Teaching

Project GLAD
Guided Language Acquisition Design
Whales here, whales there
Whales, whales everywhere!

Curious whales skyhopping,
Playful whales breaching
Noisy whales lobtailing
And motionless whales loafing

Whales in every ocean,
Whales near the coast
Whales far from shore
And whales among their pod

Whales here, whales there
Whales, whales everywhere!

[Signature]
• [3-minute video of Project GLAD strategies]
**Igneous Rock**

- **Granite** - most abundant intrusive

**Properties/Characteristics**
- Made of mineral crystals you can see
- Different colors - minerals
- Large crystals
  - Mechanical weathering - breaking rock into smaller bits
  - Chemical

**Locations where it is found**
- Deep in the earth
- Where erosion occurs

**Formation**
- Intrusive rock
  - Formed inside the earth
  - Magma cools slowly

**Interesting Facts**
- Very strong
- Weathers slowly
- Well-known Batholiths - Half Dome, Yosemite Valley

**Uses**
- Past - arrowheads, tools
- Present - statues, monuments, buildings, countertops

**Present**
- Sawtooth mountains

**Continental Crust**
- Batholiths
  - Slow cooling, large crystalline
- Mantle
- Magma chamber
Key program elements

35 instructional strategies

Usable with any curriculum

Intended as a coherent package that builds
• Readiness and motivation to learn
• Content knowledge
• Ability to converse at a high level about the topic
• Ability to read and write at a high level about the topic
<table>
<thead>
<tr>
<th>Adjective (Describes)</th>
<th>Noun (Person, Place, Thing)</th>
<th>Verb (Action)</th>
<th>Prepositional Phrase (Where)</th>
</tr>
</thead>
<tbody>
<tr>
<td>big</td>
<td>plants</td>
<td>grows</td>
<td>at our school</td>
</tr>
<tr>
<td>green</td>
<td></td>
<td>photosynthesize</td>
<td></td>
</tr>
<tr>
<td>prickly</td>
<td></td>
<td>sprout</td>
<td>in water</td>
</tr>
<tr>
<td>Smelly</td>
<td></td>
<td>germinate</td>
<td>in the ground</td>
</tr>
<tr>
<td>important</td>
<td></td>
<td>pollinate</td>
<td>under the soil</td>
</tr>
<tr>
<td>yummy</td>
<td></td>
<td>creep</td>
<td>in my garden</td>
</tr>
<tr>
<td>strong</td>
<td></td>
<td>bloom</td>
<td>around the world</td>
</tr>
<tr>
<td>pretty</td>
<td></td>
<td>wilt</td>
<td>over the fence</td>
</tr>
</tbody>
</table>
I would recommend Project GLAD to other teachers
5%  95%

I strongly believe in the philosophy and approach of Project GLAD
5%  95%

I enjoy teaching my students using Project GLAD strategies.
5%  95%

Project GLAD is an effective instructional model for all students.
5%  95%

I have never had training that has been this good!
Our research questions

What is the impact of Project GLAD® on students’ reading, vocabulary, writing, and science achievement?

For ELLs?
For nonELLs?
Study population

30 schools
  21 districts
  50% located in rural communities

2250 students
  65% Free/Reduced-Price Lunch
  33% Latino
  62% White
  13% ELLs
Cluster Randomized Trial (CRT)

30 schools agreed to participate

15 received Project GLAD®

15 had “business as usual”
Outcome measures

**English language arts**
- Reading comprehension
- Vocabulary
- Essay writing

**Science**
- Rocks & minerals unit test
- State science assessment
Year 1 Literacy Outcomes

ELLs only
What’s an effect size again?

Difference between the Tx and C
Standard deviation of the group
<table>
<thead>
<tr>
<th>Measure</th>
<th>ELs</th>
<th>Non ELs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vocabulary</td>
<td>.21~</td>
<td>.04</td>
</tr>
<tr>
<td>Comprehension</td>
<td>.24~</td>
<td>.04</td>
</tr>
<tr>
<td>Writing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ideas</td>
<td>.32~</td>
<td>.21~</td>
</tr>
<tr>
<td>Organization</td>
<td>.27~</td>
<td>.13</td>
</tr>
<tr>
<td>Voice</td>
<td>.05</td>
<td>.08</td>
</tr>
<tr>
<td>Word Choice</td>
<td>.22</td>
<td>.14</td>
</tr>
<tr>
<td>Sent. Fluency</td>
<td>.05</td>
<td>.12</td>
</tr>
<tr>
<td>Conventions</td>
<td>.02</td>
<td>.07</td>
</tr>
<tr>
<td>Rocks &amp; Minerals</td>
<td>.19</td>
<td>.23</td>
</tr>
<tr>
<td>State Science</td>
<td>.12</td>
<td>.13</td>
</tr>
</tbody>
</table>
What’s a good effect size?

Use empirical comparisons.
## Literacy
### Effect sizes for ELLs

<table>
<thead>
<tr>
<th></th>
<th>Reading</th>
<th>Vocabulary</th>
<th>Writing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Reading</td>
<td>Ideas</td>
<td>Organization</td>
</tr>
<tr>
<td>Project GLAD</td>
<td>0.24</td>
<td>0.21</td>
<td>0.32</td>
</tr>
<tr>
<td>SIOP</td>
<td>0.16*</td>
<td>0.19*</td>
<td>0.31**</td>
</tr>
<tr>
<td>QuEST</td>
<td></td>
<td>0.26</td>
<td></td>
</tr>
</tbody>
</table>

* Small sample with developers involved in training.
** Estimated based on data provided in Echevarria, Short & Powers 2006.
**Science**

Effect sizes for ELLs

<table>
<thead>
<tr>
<th>“Project”</th>
<th>State Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project GLAD</td>
<td>0.19</td>
</tr>
<tr>
<td>QuEST*</td>
<td>0.16</td>
</tr>
</tbody>
</table>

* QuEST also had positive impacts for nonELLs.
Back to our research questions

What is the impact on Project GLAD on students’ reading, vocabulary, writing, and science achievement?

For ELLs?
For nonELLs?
Starting lower means you need a bigger boost.
Vocabulary
Comprehension
Can Project GLAD close that gap?

Multiple years
Additive effect? Compounding effect?
Reflections

Content of the PD
Factors affecting implementation
Beyond the classroom
Content of the PD
Does it prepare teachers to make a difference?

- Multiple representations of concepts
- Structured interaction with academic focus
- Use of primary language
- Focus on academically useful words
- Powerful science instruction
Powerful science instruction

Inquiry-based Evidence
• Collect
• Interpret
• Communicate
Scaffolding + FOSS kits
• (ES = +1.39)
Implementation

Do teachers do the things that make a difference?

Hypothesis: higher implementation is correlated to higher outcomes
Treatment classrooms used Project GLAD® while control classrooms did not.

<table>
<thead>
<tr>
<th></th>
<th>Treatment Used Project GLAD®</th>
<th>Control Used Project GLAD®</th>
<th>Control Used something similar</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 1</td>
<td>97%</td>
<td>5%</td>
<td>9%</td>
</tr>
<tr>
<td>Year 2</td>
<td>95%</td>
<td>0%</td>
<td>1%</td>
</tr>
</tbody>
</table>
The *frequency* and *quality* of implementation varied significantly across teachers.

<table>
<thead>
<tr>
<th></th>
<th>Average</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average number of strategies per week (surveys)</td>
<td>12.5</td>
<td>0-22</td>
</tr>
<tr>
<td>Average quality rating (observations)</td>
<td>69%</td>
<td>19-100%</td>
</tr>
</tbody>
</table>
Factors affecting implementation

Hours/week spent preparing to use Project GLAD strategies

- September: 5.0
- November: 4.0
- December: 2.3
- January: 2.9
- February: 2.3
- March: 2.0
- April: 1.6
Factors affecting implementation

• On-going
• Collective participation
• “Coherence”/Buy-in from leadership
• Presence of coaches
• Explicit protocols
• Focus on solutions, not strategies
Beyond the classroom

• Culture and climate
• Connection to families
• Assessment and data use
• Interventions
• Social & emotional supports
More about the study
http://projectgladstudy.educationnorthwest.org/

Contact us
Theresa.Deussen@educationnorthwest.org

Thanks to our funders
The research reported here was supported by the Institute of Education Sciences, U.S. Department of Education, through Grant R305A100583 to Education Northwest. The opinions expressed are those of the authors and do not represent views of the Institute or the U.S. Department of Education.